

REMARKS

Reconsideration of this application, as amended, is requested.

Claims 1, 3-5, 7-9 and 11-15 and 17 remain in the application. Claim 1 has been amended to incorporate limitations that previously were in canceled claims 2, 6, 10 and 16. New claim 17 has been added.

The Examiner objected to original FIGS. 6 and 7 because the lines were not considered to be uniformly thick.

This Amendment is submitted with Replacement Sheets to replace all of the original drawings. The Replacement Sheets are believed to address the formal objections raised by the Examiner.

Claims 1-3, 6, 7, 10, 11 and 14-16 were rejected under 35 USC 102(e) as being anticipated by Flader et al. (U.S. Patent No. 6,511,256 and U.S. Patent No. 6,558,069). The Examiner noted that the Flader et al. references are directed to a roadway marker having a base 12 and a lens 40 having retroreflective surfaces aligned for reflecting light from a vehicle. The Examiner stated that Flader et al. teaches the use of fluorescent material on the lens and/or on the base. The Examiner also stated that orange was identified as the preferred fluorescent colorant. The Examiner then noted that the Flader et al. reference has a daytime signal region 47 that is free of reflective surfaces. With respect to claim 16, the Examiner noted that Flader et al. teaches ribs 30 and grooves 32. Claims 4, 5, 8, 9, 12 and 13 were rejected under 35 USC 103(a) as being obvious over Flader et al. The Examiner noted that the Flader et al. reference does not teach fluorescent yellow-green colorants or fluorescent yellow colorants. However, the

Examiner concluded that it would have been obvious to select an appropriate color to convey the appropriate traffic signal.

At the outset, it is noted that the Flader et al. reference is assigned to the assignee of the subject invention. The Flader et al. reference was cited by the applicant herein and is described in the subject application.

The Flader et al. reference represents an earlier effort by the assignee of the subject application to provide a marker with both daytime and nighttime visibility. The Flader et al. reference is very successful in this regard. In particular, the Flader et al. reference provides a base 14, a front signal means 24 and a top portion 40. The front signal means 24 has a retroreflective rear surface configured so that light of an oncoming vehicle will be reflected off the retroreflective rear surface back toward the vehicle to provide a strong nighttime signal. The daytime signal is achieved by the "edge glow" at the front edge 47 of the top portion 40. In particular, ambient light impinging on the top portion 40 at an angle other than a right angle will be internally reflected between the top and bottom surfaces of the top portion 40. Some of this internally reflected light eventually will reach the front edge 47 of the top portion 40 and will be emitted at the front edge 47 to produce the "edge glow" described in the Flader et al. reference. The Flader et al. reference explains that this daytime edge glow can be enhanced by forming the top portion 40 from a fluorescent material. Thus, the light impinging upon the top portion 40 will excite the fluorescent material and will emit additional photons that also will be internally reflected and emitted from edges, including the front edge 47. The Flader et al. reference further notes that some of the light impinging upon the top portion 40 will not be internally reflected, but rather will pass through the top portion 40 and into the base 14. Flader et al.

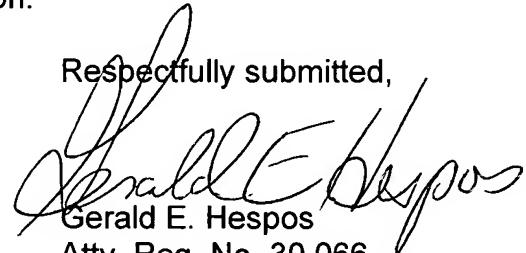
explains that the base 14 can be formed from a fluorescent material. Thus, light passing through the top portion and into the base will cause the fluorescent material in the base to emit photons. Some of those photons will be directed back into the top portion 40 and will be internally reflected in much the same way that most of the ambient light impinging on the top portion 40 is internally reflected. Thus, some of the light from some of the photons emitted from the base will contribute to the edge glow at the front edge 47.

The Flader et al. reference discloses a very effective pavement marker that achieves its objective of providing nighttime and daytime signals. However, the subject invention also teaches a very effective pavement marker that can produce both daytime and nighttime signals in ways that are not suggested at all by Flader et al. In particular, the subject application does not disclose or claim a pavement marker with a top portion comparable to the top portion 40 of Flader et al. The claimed invention does not rely upon any structural element that relies upon total internal reflection to produce an edge glow for a daytime signal. Rather, the subject invention relies exclusively on the front lens to achieve both a nighttime signal and a daytime signal. The nighttime signal is achieved by the retroreflective regions of the front lens. However, the front lens of amended claim 1 also has regions that are free of retroreflective surfaces and the back surface of the front lens in areas that are free of retroreflective surfaces are formed with ribs. The base is formed from a resin having a fluorescent material therein and includes a lens recess with grooves that nest with the ribs on the lens. The ribs and the grooves are ultrasonically welded together to form an integral matrix of resin material. These ultrasonically welded ribs and grooves on the front of the pavement marker provide the daytime signal. More particularly, light impinging upon the base will excite the fluorescent material in the base

and will emit photons. Some of these photons will pass from the base through the front lens at the regions where the ribs and grooves are ultrasonically welded to produce a daytime signal from the front lens. Thus, the front lens produces both a nighttime signal and a daytime signal. Although Flader et al. also produces daytime and nighttime signals, the Flader et al. reference has no suggestion of the unique and very effective structure of amended claim 1 and its dependent claims and new claim 17 and its dependent claims. The Examiner will appreciate that the claimed invention does not require a separate top member comparable to the top member 40 of Flader et al. to achieve a daytime signal. Thus, the subject invention has fewer components, easier assembly and lower costs. Furthermore, the pavement marker defined by the amended claims herein provides the daytime signal over a much larger area, and hence can provide a more effective daytime signal in at least certain situations.

In view of the preceding amendments and remarks, it is submitted that the invention defined by the amended claims is directed to patentable subject matter and allowance is solicited. The Examiner is urged to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,



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